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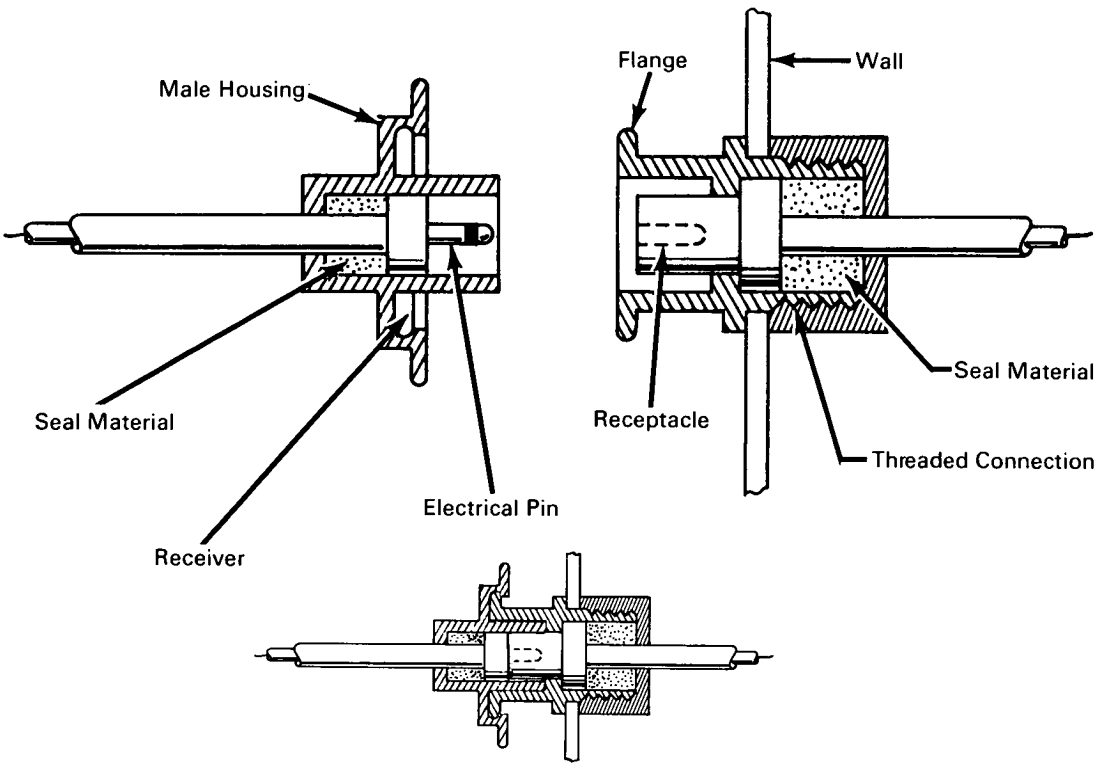
NASA TECH BRIEF

Inexpensive Electrical Connector Is Moisture and Corrosionproof



The problem: Provide an inexpensive, moisture-proof electrical connector for use in a corrosive atmosphere. Few electrical pin-type connectors are waterproof, and those such as the lanyard-type connectors that are waterproof are expensive.

The solution: A simple compression-sealed connector made principally of plastic components. The simple design and the use of plastic make the connector inexpensive.

How it's done: The connector assembly consists of three basic parts, a male housing, a female housing, and a seal cap. The female housing is installed in a support bracket or through a wall by threading it into the seal cap. The cap compresses the seal material to effect a moisturetight closure around the wire entering the female housing. The male housing has an electrical pin that mates with the receptacle in the female housing. As the two housings are engaged, the seal material in the male housing is compressed, sealing the wire

(continued overleaf)

entering the male housing. The two housings are held together by the action of the flange on the female housing engaging the receiver on the male housing.

Notes:

1. This design could be readily modified to provide a multiple-pin connector.
2. When suitable plastic materials are used, this design maintains connector integrity in corrosive environments such as salt spray, chemical atmospheres, etc.
3. Inquiries concerning this invention may be directed to:

   Technology Utilization Officer
   Manned Spacecraft Center
   P.O. Box 1537
   Houston, Texas, 77001
   Reference: B65-10196

Patent status: NASA encourages the immediate commercial use of this invention. Inquiries about obtaining rights for its commercial use may be made to NASA, Code AGP, Washington, D.C., 20546.

Source: North American Aviation, Inc. under contract to Manned Spacecraft Center (MSC-164)